

Druckexemplar

CLAIMS

1. A plain bearing having an overlay alloy layer at a sliding surface of the plain bearing, the plain bearing comprising a layer of a strong backing material, a layer of a first bearing alloy bonded to the strong backing material and a layer of a second bearing material comprising said overlay material bonded to said first bearing alloy layer, characterised in that said second bearing material comprises essentially pure tin without any other metallic alloying constituents, other than unavoidable impurities, having included in the matrix thereof an organic levelling agent.
2. A plain bearing according to claim 1 wherein the organic material is selected from at least one of: nonylphenolpolyglycolether and pyrocatechol.
3. A plain bearing according to either claim 1 or claim 2 wherein the hardness of the overlay is in the range from about 20 to 30Hv.
4. A plain bearing according to any one preceding claim further including an interlayer between the surface of the first bearing material and the tin overlay to act as a diffusion barrier therebetween.
5. A plain bearing according to claim 4 wherein the interlayer is selected from the group comprising: nickel, cobalt, copper, silver, iron and alloys thereof.
6. A method for the deposition of an overlay layer onto the surface of a plain bearing, the bearing

comprising a strong backing material having a layer
of a first bearing material thereon, said overlay
being deposited upon the surface of said first
bearing material, the method comprising the steps
5 of: providing a bearing having a surface on which to
deposit said overlay; immersing said bearing in a
plating solution having a supply of tin ions and an
organic levelling agent in said solution; making
said bearing cathodic with respect to an anode in
10 said solution; and depositing an overlay of
essentially pure tin without any other metallic
alloying constituents, apart from unavoidable
impurities, said tin overlay also having said
organic levelling agent included in a matrix
15 thereof.

7. A method according to claim 6 wherein the overlay is
deposited in a slot jig apparatus.
- 20 8. A method according to claim 7 wherein the plating
solution is sparged through the slot towards the
bearing bore.
- 25 9. A method according to either claim 6 or claim 7
wherein a plating current density lies in the range
from 2 to 3 A/dm².